

concludes that the Wisconsin species represent several floristic sources as to their origin. The largest element seems related to the southeastern woodland; the next largest group to the prairie floras. Most of these species find their northeastern or northwestern limit in Wisconsin. In addition there is a marine beach element occurring chiefly on the shores of the Great Lakes and elsewhere on the beaches of the Atlantic and Pacific oceans. One species is recorded as Arctic in origin and a few as very local in Wisconsin; only one strictly endemic species is recorded. Attempts at correlation with glacial history as well as with the edaphic problems of the state are made.

Such graphic presentations of the occurrence of species are sorely needed before intelligent conclusions can be drawn as to distributional problems. They present first the problems of presence and absence and point the way to investigation aimed to determine the adequacy of the data. The first question that comes to mind concerning a gap in distribution is whether or not the area has been adequately collected. There are already too many conclusions based upon inadequate collections. They present next, problems involving the causes of the distribution pattern. Comparisons of these maps with soil, climatic or geological maps can aid one in determining whether the controlling factor is climatic or edaphic, or whether it involves also complex geological and migrational history.

In glancing at the maps presented there is much that tempts speculation. On most of the maps a blank spot stands out that seems to one not familiar with the physical features of the region to call for explanation. This area which centers in Richland County and involves the adjacent portions of adjoining counties to the east, west and north, coincides with a portion of the driftless area. The location of rivers is well marked by collectors' localities. Again the question arises: is the river the agent of dispersal or only the highway of the collector? A general discussion of some of these problems in the light of the data presented would have been appreciated by the reader who is fully aware of the difficulties imposed upon the problem by a settled immaculate agriculture.

In general the author's ideas are clearly expressed and well presented. Details of description are clarified by good illustrations; the typography is excellent.—H. L. M.

Flora of Riverside and Vicinity. By ROSAMOND A. FAWCETT. Occasional Papers of Riverside Junior College, Volume IX, Number 1. Pp. 172 with three pages of line drawing and a map of Riverside County, California. Published by the Junior College, Riverside, California, April 1, 1939.

"Western Riverside County, to the east edge of the Coachella Valley, and a contiguous portion of San Bernardino County to

the north foot of the San Bernardino Mountains and keys for determining the names of native trees, shrubs, herbs, ferns, and most of the weed plants of cultivated fields. (The grasses are omitted.)" Thus reads the subtitle of the most recent addition to the local floras of the California area. The work is composed of keys to family, genus and species. Descriptions are not included. The first page treats of the principal groups of plants in which are differentiated the Thallophyta and Embryophyta, the Atracheata and Tracheata, the Lycopsida and Pteropsida, the Gymnospermae and Angiospermae, and the Dicotyledoneae and Monocotyledoneae. This series of main subdivisions has not previously been used in any California flora. Only the Lycopsida and Pteropsida are treated further. The arrangement is essentially Englerian. The work should prove a useful addition within its intended scope in the local area to which it applies.—H. L. M.

NOTES AND NEWS

ELODEA Densa CASP. IN CALIFORNIA. Recent collecting in the marshes of the delta of the San Joaquin River disclosed large colonies of *Elodea densa* Casp. flowering abundantly in Trapper's Slough on Roberts Island about eight miles west of Stockton (*H. L. Mason 12,075*, August 26, 1938). This is a common South American species apparently recently escaped from cultivation. It has been reported also from Florida. It differs from *E. canadensis* Michx. in its larger size, its leaves in whorls of four instead of two or three, and its flowers two or three to a spathe instead of solitary.—H. L. M.

RIBES TULARENSE (COV.) FEDDE IN SEQUOIA NATIONAL PARK. *Ribes tularense* (Cov.) Fedde, described thirty years ago from a single specimen and not since recognized in the field, has recently been discovered in Sequoia National Park by T. H. Harris and F. A. Patty, members of the blister rust control project of the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture. Originally collected in Giant Forest, Tulare County, California, by Katherine Brandegee in 1905, the species was described by Frederick V. Coville as *Grossularia tularenensis*. It is considered a distinct entity by Alwin Berger in his monograph of the genus (*N. Y. State Agr. Expt. Sta., Tech. Bull. 109: 87. 1924*). Jepson treats it as conspecific with *Ribes binominatum* Heller (*Fl. Calif. 2: 159. 1936*).

Plants of *Ribes tularense* were found in abundance, in May, 1938, along the Colony Mill road on north-facing and east-facing slopes at an altitude of about five thousand feet in a dense forest consisting mainly of white fir (*Abies concolor* Lindl. & Gord.) and sugar pine (*Pinus Lambertiana* Dougl.) The Colony Mill road is the "old" (North Fork of the Kaweah River) road into Giant Forest from Three Rivers, Tulare County. In the fall of 1938,